



# DATA SHEET

## Hall Effect Current Sensor

PN: CHB\_LAE15D150/200

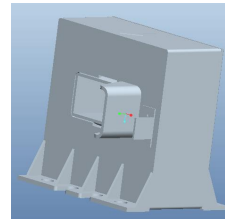
IPN=50~300A

### Feature

- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC  $\pm 12\sim 18$  V

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference
- Very good linearity
- Can be customized



### Applications

- The application of induction cooker
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS



### Electrical data: (Ta=25°C, Vc=±15VDC)

Parameter	Ref	CHB50	CHB100	CHB200	CHB300	CHB500
		LAE15D500	LAE15D100	LAE15D100	LAE15D150	LAE15D250
Rated input I <sub>pn</sub> (A)		50	100	200	300	500
Measuring range I <sub>p</sub> (A)		0 ~ ±150	0 ~ ±300	0 ~ ±600	0 ~ ±700	0 ~ ±700
Turns ratio N <sub>p</sub> /N <sub>s</sub> (T)		1:1000	1:1000	1:2000	1:2000	1:2000
Output current rms I <sub>S</sub> (mA)		±50*IP/IPN	±100*IP/IPN	±100*IP/IPN	±150*IP/IPN	±250*IP/IPN
Secondary coil resistance R <sub>S</sub> (Ω)		15	15	33	33	33
Inside resistance R <sub>M</sub> (Ω)		[(VC-0.5V)/(IS*0.001)]-RS				
Supply voltage V <sub>C</sub> (V)		(±12 ~ ±18) ±5%				
Accuracy X <sub>G</sub> (%)		@IPN,T=25°C		< ±0.5		
Offset current IOE(mA)		@IP=0,T=25°C		< ±0.2		
Temperature variation of IOE IOT(mA/°C)		@IP=0,-40 ~ +85°C		< ±0.5		
Linearity error ε <sub>r</sub> (%FS)		< 0.1				
Di/dt accurately followed (A/μs)		> 100				
Response time τ <sub>r</sub> (μs)		@90% of IPN		< 1.0		
Power consumption I <sub>C</sub> (mA)		25+I <sub>s</sub>				
Bandwidth BW(KHZ)		@-3dB,IPN		DC-100		



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Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	5.5
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## General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	130
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

	<p style="text-align: center;">Connection</p>
	<p style="text-align: center;">General tolerance</p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;            Primary through-hole: <math>13*30\pm 0.15\text{mm}</math>            Secondary pin: MOLEX 5045</p>

## Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be <math>< 100^{\circ}\text{C}</math>.

**WARNING : Incorrect wiring may cause damage to the sensor.**

